

Call for Research Proposals

Title: Distribution of the Swift Fox (*Vulpes velox*) in Texas.

Contact: Jonah Evans (jonah.evans@tpwd.texas.gov)

Introduction

The swift fox (*Vulpes velox*) is historically known to occur in 79 counties of north Texas. However, surveys conducted by Schwalm (2012) in 2005 and 2006 suggest a dramatic reduction in distribution to just 2 counties (Dallam and Sherman) in the Northwestern Panhandle. These results combined with numerous anecdotal reports of a possible decline are cause for concern and further research. Despite this apparent decline, the swift fox distribution in Texas has not been studied for over 10 years.

Additionally, there is a general lack of data regarding swift foxes in Texas and there are just 41 records in the TXNDD, all from 1933–1995.

Justification

The 2013 Land and Water plan states, “TPWD will protect and assist in the recovery of threatened, endangered and high-priority species.” The apparent declines in the swift fox distribution in Texas is an important signal that the species may be declining and more research is needed.

One of the stated duties of the TPWD rare species program is to: “to prevent the need for future threatened and endangered species listings and to recover listed species.” US Fish and Wildlife determined that listing the swift fox is currently warranted but precluded by higher priorities. By researching the current distribution of the swift fox in Texas we will be equipping ourselves with the information needed to initiate effective conservation efforts to ensure this species persists in Texas in the future.

Objectives

The goal of the study is to map the current distribution of the swift fox in Texas. Studies should investigate these main objectives:

1. Survey historic and potential sites to determine the current distribution of the swift fox.
 - Identify locations with previously documented swift fox populations and determine if they are still present in the area.
 - Survey areas of suitable habitat as determined by a pre-defined selection method or model (e.g., niche or habitat suitability or utilization model, etc.) in order to locate currently unknown swift fox populations.
 - Gather sighting reports from local biologists, rancher managers, landowners, etc. to identify possible swift fox survey locations.

- Use of trail cameras, citizen scientists, and other low cost methods is encouraged to increase the survey area and detectability.
- 2. Design the study so that it can be replicated in the future for long-term trend analyses.
- 3. Use landscape features to predict potential occupancy on un-surveyed lands.

The study should be conducted within the historic distribution of the swift fox with emphasis in the Texas Panhandle. Access to private lands will be critical for the success of this project and all appropriate documents must be approved by respective landowners prior to conducting research on private property. Specific research, theoretical or statistical hypotheses related to distribution (presence, occupancy, detectability, etc.) is requested.

Expected Management Implications

Knowledge about the current distribution of the swift fox is important for properly managing this species. Additionally, the identification of any small, isolated populations could present ideal conservation opportunities and source populations. This project could provide essential information for future restoration.